CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-125
NPDES NO. CA0038679

WASTE DISCHARGE REQUIREMENTS FOR:

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
SAN LORENZO CREEK INTERMITTENT WET WEATHER DISCHARGE
SAN LEANDRO, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. The Livermore-Amador Valley Water Management Agency (LAVWMA), hereinafter the Discharger, by application dated May 29, 1990, has applied for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

2. The Discharger proposes to seasonally discharge up to 1.28 million gallons per day (mgd) of secondary treated, chlorinated and dechlorinated wastewater for a maximum duration of two consecutive days during extreme wet weather to San Lorenzo Creek. Discharges to the Creek are estimated to occur once every four to five years. The discharge from the LAVWMA dechlorination facility is a surface discharge at a point located westerly of Lewelling Boulevard where the Southern Pacific Railroad bridge crosses San Lorenzo Creek, at Latitude 37 deg., 40 min., 30 sec., and Longitude 122 deg., 09 min., 14 sec. San Lorenzo Creek is a lined flood control channel within the tidal prism at the discharge point and flows to Lower San Francisco Bay where an initial dilution of greater than 10:1 is expected.

3. Under present contractual agreements, LAVWMA currently discharges treated wastewater (19.72 mgd contractual maximum) into the East Bay Dischargers Authority (EBDA) transport pipeline and deepwater outfall into Lower San Francisco Bay. Studies indicate that an additional 1.28 mgd can be exported via its existing pipeline and pump station with minor modifications, but that any additional expansion would necessitate major construction of new facilities which are not part of this Order. In June 1985, the Dischargers modified their contractual agreements to allow LAVWMA to export an additional 1.28 mgd of flow through the EBDA system except during periods when EBDA requires full capacity in its pipeline for its own use. During these periods of full

capacity, the Discharger may discharge the additional 1.28 mgd to San Lorenzo Creek.

4. Order No. 89-098 (NPDES No. CA0037869) regulates discharges from LAVWMA through the EBDA system. Tributary agencies to LAVWMA, the Dublin San Ramon Services District and the City of Livermore, are currently regulated by separate waste discharge requirements contained in Order Nos. 89-099 (NPDES No. CA0037613) and 89-100 (NPDES No. CA00378006), respectively.

5. LAVWMA became effective on March 26, 1979, as a joint powers agency created for wastewater management planning for the service areas of Livermore, Pleasanton, and the Dublin San Ramon Services District (DSRSD). By contractual agreement, DSRSD is responsible for operating and maintaining the LAVWMA export pipeline, pump station, and dechlorination facility.

6. The discharge is presently governed by Waste Discharge Requirements, Order No. 85-110 which allow intermittent discharge into San Lorenzo Creek.

7. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for San Lorenzo Creek, Lower San Francisco Bay and contiguous waters.

8. The beneficial uses of San Lorenzo Creek and Lower San Francisco Bay include:

<u>San Lorenzo Creek</u>

a. Water and Non-Water Contact Recreation
b. Wildlife Habitat
c. Warm and Cold Fresh Water Habitats
d. Fish Migration and Spawning
e. Ground Water Recharge
f. Fresh Water Replenishment
g. Municipal and Domestic Supply

<u>San Francisco Bay</u>

a. Preservation of Rare and Endangered Species
b. Navigation
c. Commercial and Sport Fishing
d. Fish Migration and Spawning
e. Water and Non-Water Contact Recreation
f. Industrial Service and Process Supply

g. Shellfish Harvesting
h. Estuarine Habitat

9. The Basin Plan as amended in 1986 contains a prohibition of discharge of any wastewater which has particular characteristics of concern to beneficial uses into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof.

10. The Basin Plan allows exceptions to this discharge prohibition in three cases:

    a. an inordinate burden would be placed on the discharger relative to beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or

    b. a discharge is approved as part of a reclamation project; or

    c. it can be demonstrated that net environmental benefits will be derived as a result of the discharge.

11. An exception based on finding 10.a. is justified for the following reasons:

    a. A habitat study performed by the Discharger has shown that the discharge as proposed will meet the beneficial use concerns of the California Department of Fish and Game and Regional Board.

    b. The discharge as proposed will be intermittent (once every four to five years during wet weather only).

    c. The Discharger's system and its tributary wastewater treatment plants provide reliable and adequate secondary treatment of wastewaters.

    d. An inordinate financial burden would be placed on the Discharger by expanding the existing EBDA pipeline to accommodate the additional 1.28 mgd flow.

12. This Order serves as an NPDES permit, reissuance of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

13. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

14. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that Livermore-Amador Valley Water Management Agency and East Bay Dischargers Authority, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the dechlorination facility or from any of the joint facilities or the Discharger export system and pump stations during wet weather (October 15 through April 15) is prohibited.

2. Discharge during dry weather is prohibited.

3. The average daily flow shall not exceed 1.28 mgd and shall be limited to periods when EBDA requires the full capacity of its outfall.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituents	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Total Suspended Solids	mg/l	--	--	60	--
b. Settleable Matter	ml/l-hr	--	--	0.2	--
c. Total Chlorine Residual (1)	mg/l	--	--	--	0.0
d. Carbonaceous BOD	mg/l	--	--	50	--
e. Oil & Grease	mg/l	--	--	20	--

(1) Requirement defined as below limit of detection in standard test methods.

2. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

3. Any single total coliform sample shall not exceed 10,000 MPN/100 ml.

4. The survival of test organisms acceptable to the Executive Officer in 96-hour static bioassays of the effluent shall achieve a value of at least 50% survival.

5. Representative samples of the effluent shall not exceed the following limits in micrograms per liter (ug/l): (1)

Constituent		Daily Maximum
a.	Arsenic	200
b.	Cadmium	30
c.	Chromium (VI) (2)	110
d.	Copper	200
e.	Lead	56
f.	Mercury	1
g.	Nickel	71
h.	Silver	23
i.	Zinc	580
j.	Cyanide	25
k.	Phenols	500
l.	PAHs (3)	150

(1) These limits are intended to be achieved through secondary treatment and applicable pretreatment programs.

(2) The Discharger may at its option meet this limit as total chromium.

(3) Polynuclear Aromatic Hydrocarbons (PAHs) as identified by EPA Method 610 or 625. If an effluent discharge exceeds this limit, the concentrations of individual constituents shall be reported.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any point:

a. Floating, suspended, or deposited macroscopic particulate matter or foam;

b. Bottom deposits or aquatic growths;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved Oxygen	5.0 mg/l minimum
b.	Dissolved Sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized Ammonia	0.4 mg/l as N Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 85-110 adopted on September 18, 1985. Order No. 85-110 is hereby rescinded.

2. Where concentration limitations in mg/l are contained in this

permit, the following mass emission limitations shall also apply as follows:

Mass Emission Limit in lbs/day = Concentration Limit in mg/l x 8.34 x Actual Flow in MGD averaged over the time interval to which the limit applies.

3. The Discharger shall comply with all sections of this Order upon adoption.

4. The Discharger shall comply with the self-monitoring program as adopted by the Board, and the Executive Officer may make minor amendments to it.

5. The Discharger shall review and update by April 15, annually, its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 if the California Water Code.

6. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.

7. The Discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year.

8. This Order expires September 19, 1995. The Discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as applicable for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Board, San Francisco Bay Region on September 19, 1990.

STEVEN R. RITCHIE
Executive Officer

Attachments:
Standard Provisions & Reporting Requirements, December 1986
Self-Monitoring Program
Resolution 74-10

[File No. 2199.9129]
[Originator/MJR]
[Reviewer/SAH]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY

SAN LORENZO CREEK INTERMITTENT WET WEATHER DISCHARGE

SAN LEANDRO, ALAMEDA COUNTY

ORDER NO. 90-125

CONSISTING OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT - DECHLORINATION FACILITY

Station	Description
E-001	At any point in the Discharger's system facilities at which adequate disinfection and dechlorination has taken place and prior to the point of discharge.

B. RECEIVING WATERS (SAN LORENZO CREEK)

Station	Description
C-1	At a point located 100 feet upchannel from the discharge point.
C-2	At a point located 100 feet downchannel from the discharge point.
C-3	Reference station located 1/2 mile upchannel and/or out of the discharge's zone of influence.

C. LAND OBSERVATIONS - DECHLORINATION FACILITY

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the dechlorination facility.

D. OVERFLOWS AND BYPASSES - DIVERSION FROM EBDA SYSTEM

Station	Description
O-1 through O-'n'	Bypass or overflows from pump stations or diversion pipeline/relief valve system from the EBDA system.
NOTE:	In the event of bypass or overflow, the Discharger shall submit a SMP report to the Regional Board including a map and description of bypass or overflow location.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-125.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

Attachments:
Table 1
Part A (December 1986)
Location Map

STEVEN R. RITCHIE
Executive Officer
Effective Date 9/19/90

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			All C Sta.	All P Sta.	All O Sta.
TYPE OF SAMPLE	C-X	G	Cont	G	O	O
Flow Rate (mgd)	E					
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	E					
Chlorine Residual & Dosage (mg/l & kg/day) (3)			E			
Settleable Matter (ml/l-hr. & cu. ft./day)		E				
Total Suspended Matter (mg/l & kg/day)	E					
Oil & Grease (mg/l & kg/day)		E				
Coliform (Total or Fecal) (MPN/100 ml) per req't (1)		E				
Fish Toxicity, 96-hr. TL_{50} (6) % Survival in undiluted waste	E					
Ammonia Nitrogen (mg/l & kg/day) (2)	E					
Nitrate Nitrogen (mg/l & kg/day)						
Nitrite Nitrogen (mg/l & kg/day) (2)	E					
Total Organic Nitrogen (mg/l & kg/day)						
Total Phosphate (mg/l & kg/day)						
Turbidity (Jackson Turbidity Units)						
pH (units)		E		E		
Dissolved Oxygen (mg/l and % Saturation)		E		E		
Temperature (°C)		E		E		
Apparent Color (color units)						
Secchi Disc (inches)						
Sulfides (if DO < 5.0 mg/l) Dissolved (mg/l)		E		E		
Arsenic (mg/l & kg/day) (5)	C					
Cadmium (mg/l & kg/day) (5)	C					
Chromium, Total (mg/l & kg/day) (5)	C					
Copper (mg/l & kg/day) (5)	C					
Cyanide (mg/l & kg/day) (5)	C					
Silver (mg/l & kg/day (5)	C					
Lead (mg/l & kg/day) (5)	C					

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			All C Sta.	All P Sta.	All O Sta.							
TYPE OF SAMPLE	C-X	G	Cont	G	O	O							
Mercury (mg/l & kg/day) (5)	C												
Nickel (mg/l & kg/day) (5)	C												
Zinc (mg/l & kg/day) (5)	C												
PHENOLIC COMPOUNDS (mg/l & kg/day) (5)	C												
All Applicable Standard Observations		E		E	D	D							
Bottom Sediment Analyses and Observations													
Polynuclear Aromatic Hydrocarbons (mg/l & kg/day) (5)	C												
Un-ionized Ammonia (mg/l) (2)		E		(4) E									
Dilution Ratio Estimate (4)		E											

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
- Cont = continuous sampling
- DI = depth-integrated sample
- BS = bottom sediment sample
- O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations
- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- L = basin and/or pond levee stations
- B = bottom sediment stations
- G = groundwater stations
- O = Overflow or bypass stations

FREQUENCY OF SAMPLING

- E = each day of discharge
- H = once each hour
- D = once each day of operation of dechlorination facility
- M = once each month
- Y = once each year
- C = once each period of continuous discharge
- 2/H = twice per hour
- 2/W = 2 days per week
- 5/W = 5 days per week
- 2/M = 2 days per month
- 2/Y = once in March and once in September
- Q = quarterly, once in March, June, Sept. and December
- 2H = every 2 hours
- 2D = every 2 days
- 2W = every 2 weeks
- 3M = every 3 months
- Cont = continuous

TABLE I FOOTNOTES

(1) Sampling and compliance with the Total Coliform effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. A letter requesting the above modification in sampling requirements shall be submitted to the Executive Officer. Coliform data for the plant shall be submitted with the discharger's report for the appropriate sampling days.

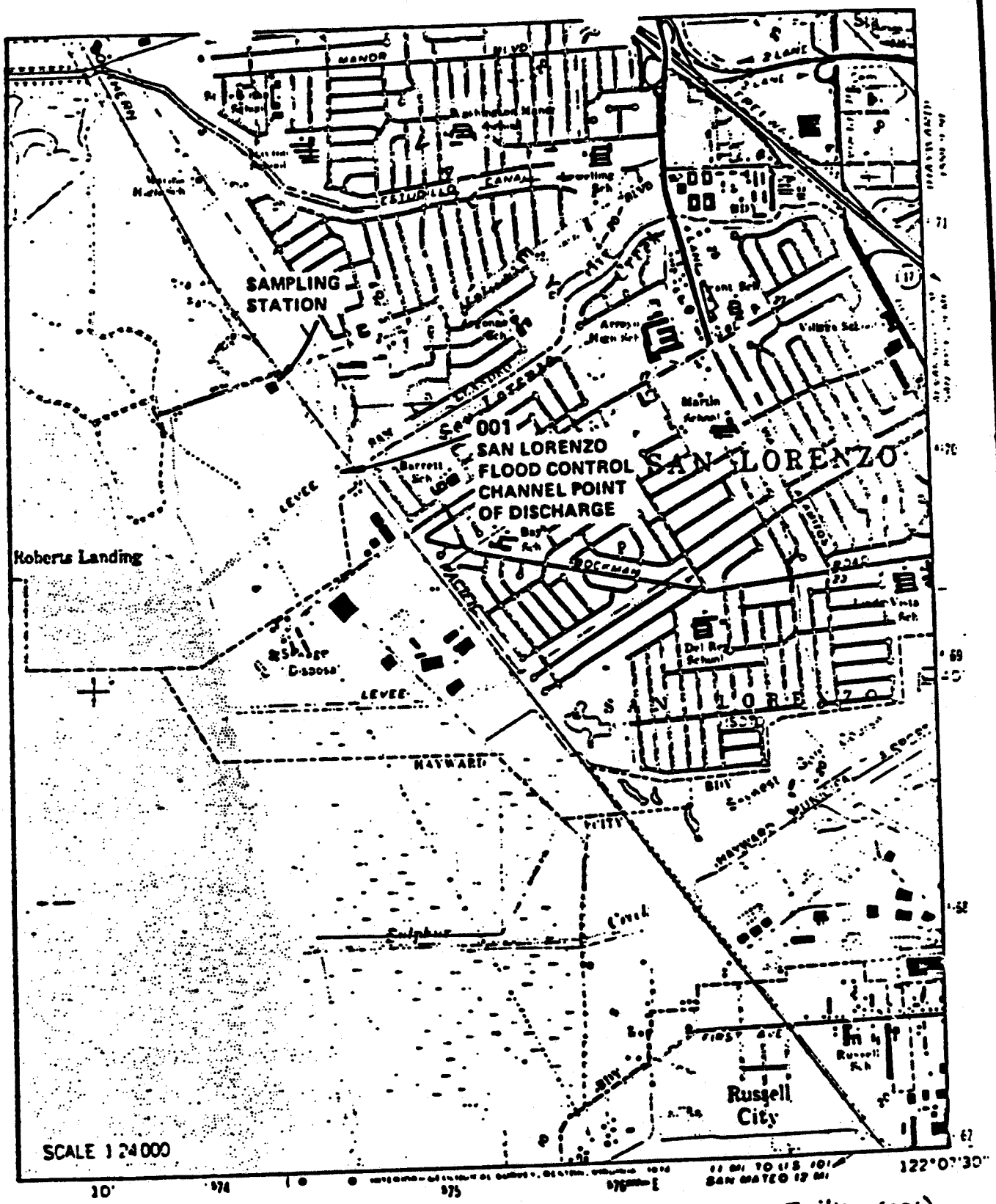
(2) Ammonia nitrogen, nitrite nitrogen, and un-ionized ammonia shall be analyzed with the same composite samples used for the fish bioassay test.

(3) Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

(4) Minimum and maximum dilution rations (effluent vs. channel flow) shall be calculated for each day of discharge. The concentration of un-ionized ammonia after dilution for receiving water stations (C-1 & C-2) may be calculated upon approval by the Executive Officer of a satisfactory methodology submitted by the discharger.

(5) Sampling and compliance with the various metallic, phenolic, and Polynuclear Aromatic Hydrocarbon effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. Results shall be reported with the self-monitoring report.

(6) Fish Toxicity shall be determined using 96-hour static bioassays representative of the discharged effluent. One specie shall be three-spined stickleback, and the other shall be either rainbow trout or fathead minnow. Effluent used for fish bioassays must be undiluted and dechlorinated effluent.



ATTACHMENT A Dechlorination Facility (001)

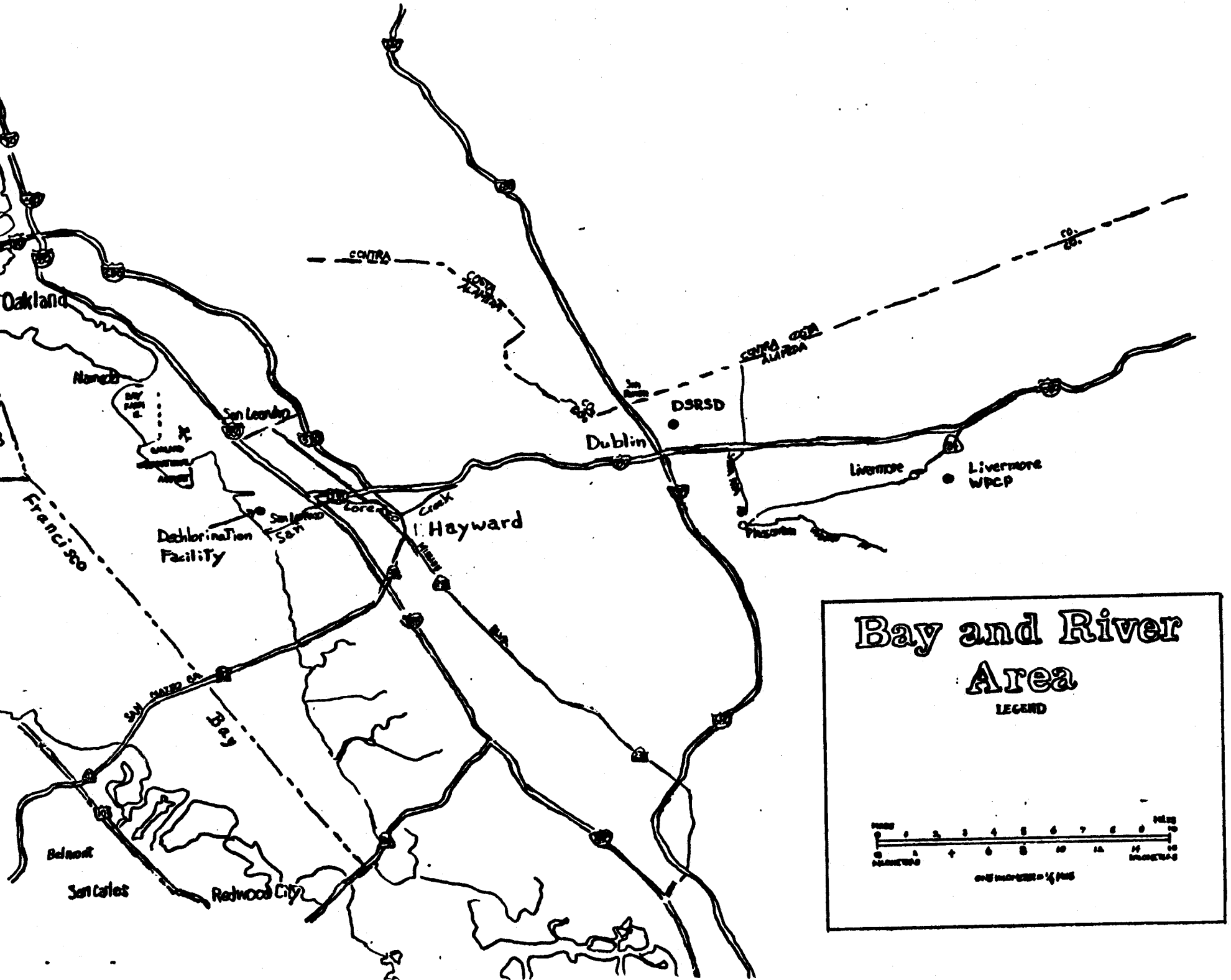
LOCATION MAP

From U.S. Geological Survey Map, 1959, San Leandro, California

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

CH2M HILL


Oakland
Alameda
San Leandro
Dublin
DSRSD
Livermore
Livermore WPCP
Pleasanton
Hayward
Dechlorination Facility
Bay
Belmont
San Carlos
Redwood City
Bay and River Area
LEGEND